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EXAMINER

SAETHER, FLEMMING

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/631,907  
Filing Date: July 31, 2003  
Appellant(s): LITWINSKI ET AL.

**MAILED**

APR 06 2007

**GROUP 3600**

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Nicholas F. Gallo  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 11/14/2006 appealing from the Office action mailed 3/14/2006.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the supplemental brief is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

JP 10-195567	Y.K.K. Corporation	7-1998
US 4,156,666	Briles	7-1979

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

*Claim Rejections - 35 USC § 102*

Claims 38-42 are rejected under 35 U.S.C. 102(b) as being anticipated by the Japan reference JP 10195567A (Japan '567). In the translated abstract and use of the Japan '567 reference is disclosed an a rivet manufactured to include a matrix having a grain size of 5 micrometers or less which is within the claimed range. Japan further discloses the material to include aluminum and its combination with other materials would make an aluminum alloy. The stir welding is a product-by-process limitation wherein it is only the final product considered for patentability. In regards to claim 38, the material not having the grain size of 5 micrometers or less is such a small percentage of the overall volume (38%) the structure would continue to "consist essentially of" the grain size of 5 micrometers also, the small amount of material which does not fall within the claimed range is "about" within the range. As discussed further below, "consist essentially of" is to be construed as equivalent to "comprising". See, e.g., *PPG*, 156 F.3d at 1355, 48 USPQ2d at 1355. Furthermore, the preamble uses "comprising" thus not limiting the rivet to the claimed 3 to 5 micrometers.

*Claim Rejections - 35 USC § 103*

Claims 43-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan '567 as applied to claim 38 above, and further in view of Briles (US 4,159,666). The translation of Japan '567 does not disclose the specific configuration of the rivet nor the rivet including titanium. Briles discloses a rivet having a head as well as the equivalence of aluminum and titanium in rivets (column 3, lines 51-56). At the time the invention was made, it would have been obvious for one of ordinary skill in the art to form the rivet of Japan '567 as having a head and of titanium as disclosed in Briles such that the rivet would conform with the substrates to prevent the formation of gaps at the head, as discussed in Briles. The particular aluminum alloy is known and would have been recognized to use depending upon the particular application.

**(10) Response to Argument**

Appellant initially addresses the 112 first paragraph rejection noting that the rejection has been withdrawn and there is no new matter. In response, the examiner agrees. The 112 first paragraph has been withdrawn because the appellant has pointed to a location in the specification where "consisting essentially of" was used in the description of one embodiment of the invention.

Appellant argues that claim 38 defines over the reference to Japanese JP 10195567A ("JP '567") because JP '567 discloses the mean grain size of the aluminum and boride to be not more than 100nm and not more than 1 $\mu$ m respectively which is

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outside the claimed range of about 3-5 $\mu$ m. In response, the examiner does not dispute that JP '567 discloses a grain sizes outside of the claimed range but, it nonetheless discloses the grain size of the resulting matrix inclusive of the claimed range "the mean grain size of the matrix not being more than 5 $\mu$ m" (Translation paragraph [0005]).

Importantly, it should be noted that the all the grain sizes are described in JP '567 are a mean size thus the gain sizes are not an absolute but, include some variation in size and, similarly the claims only require the grain to be "about" within the range. Thus, when considered together, there would clearly be at least some overlap between the grain sizes disclosed in JP '567 and those claimed.

In general, the examiner concedes that JP '567 discloses grain sizes outside the claimed range but, since the claims only require the gain size as "consisting essentially of" there is no requirement that JP '567 cannot have grains outside the claimed range.

Appellant next argues the rejection, first, because a with the overall percentage (applicant provided 38% see appellants remarks filed 12-19-2005 at page 6) material outside the claimed ranges it cannot be considered that the structure still "consists essentially of" due to the significance of the gain size to the formability of rivets.

Appellant argues that any material outside the claimed range materially affects the basic and novel characteristics of the rivet by referring to the characteristics provided by the refined grain structure as described in the specification. In response, the examiner disagrees because merely pointing to the specification for the advantageous properties is insufficient to show that the additional materials, as included in JP '567, would

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materially affects the basic and novel characteristics of the rivet. Indeed, there is no showing that the rivet of JP '567, even with the additional materials, would not operate to have the same characteristics noted in appellant's disclosure.

Appellant argues that similar to the facts in *In re Lajarte* appellant has met the burden of showing that the additional material in JP '567 would change the characteristics of the invention. In response, the examiner disagrees because the facts of *In re Lajarte*, which deals with an electrical insulator, are different than the facts of the instant case which deals with a rivet. However, as the general concepts may be applied to the instant case, in the case of *In re Lajarte* it was recognized by the court that applicant has shown "his glass has basis and novel properties" [emphasis added]. However, and to the contrary, in the instant application there has simply been no showing of novelty. Nowhere does appellant show that the grain structure claimed has basic and novel properties not also present in JP '567. The fact that the claimed grain structure has certain characteristics as discussed in the specification does not mean they are novel. There is no evidence that the grain structure in JP '567 does not also have the same characteristics. Thus, while the claimed grain structure of the instant invention can be said to have certain characteristics, it cannot be said that they are novel. It remains appellant's burden to show that with the inclusion of the additional material in JP '567 it would not have the same characteristics as appellant's.

Appellant further notes that the Office Action does not suggest reasons for omitting the additional material in JP '567. In response, the examiner agrees because the Office Action is not looking to modify JP '567.

Appellant next argues the rejection, second, because the grain size disclosed in JP '567 cannot be considered as being "about" within the claimed range since they are only 1/3 to 1/30 of the limit of the range. In response, the examiner disagrees for two reasons: First, the 1 $\mu$ m is considered as "about" at the low end of the range of 3 $\mu$ m since the range, taken as a whole, is 3-5 $\mu$ m and is without criticality by being only limited by "about". Secondly, the reference to JP '567 only refers to the grain sizes as being a mean grain size which is to say that grains are not limited to all being exactly 1 $\mu$ m but, their mean is not to exceed 1 $\mu$ m thus, there would have to be grains greater than 1 $\mu$ m for there to be a mean of 1 $\mu$ m which would anticipate the "about" 3 $\mu$ m at the low end of appellant's claimed range. Furthermore, along the same lines, since JP '567 discloses the overall matrix to be up to 5 $\mu$ m there must be grains larger than 1 $\mu$ m otherwise, the 5 $\mu$ m would be impossible. In general, when one considers that neither the disclosure of JP '567 nor the claims require exact values, when taken as a whole the grain sizes disclosed in JP '567 would anticipate the "about" range.

Appellant next argues the rejection, third, because "consisting essentially of" is not equivalent to "comprising". In response, the examiner agrees however, since appellant has not shown basic and novel characteristics, as discussed above, the transitional phrase "consisting essentially of" must be construed as equivalent to "comprising" (MPEP 2111.03; PPG, 156 F.3d at 1355, 48 USPQ2d at 1355).



Appellant next argues the rejection, forth, because the use of “comprising” in the preamble does not eliminate the “consisting essentially of” required range. Appellant argues that the “comprising” in the preamble only allows the rivet to have additional feature not head and shank since those have been limited to “consisting essentially of”. In response, while the examiner understands applicant’s position, the examiner must disagree. In a situation, where “comprising at least a portion” was then further limited by “wherein said portion consists of” the court stated that use of “consists” in the body of the claim did not limit the “comprising” language. (MPEP 2111.03; *Mannesmann Demag Corp. v. Engineered Metal Products Co.*, 793 F.2d 1279, 230 USPQ 45 (Fed. Cir. 1986). >See also *In re Crish*, 393 F.3d 1253, 73 USPQ2d 1364 (Fed. Cir. 2004)). Similarly, in the instant application the “consisting essentially of” does not limit the “comprising” in the preamble because the open-ended comprising allows the claims to cover multiple grain sizes.

Appellant argues dependent claims 39, 41 and 42 separately arguing that the stir welding process adds an additional distinction. However, appellant then relies on the features of claim 38. In responding to appellant’s arguments, appellant has not shown that the process of stir welding leads to a materially different product. Furthermore, JP ‘567 even discloses “friction welding” ([0009]) as one of a number of possible processing methods.

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Appellant argues dependent claims 40, and 43-46 separately arguing that the prior art does not disclose the specific aluminum alloy having the grain structure within the recited range. In response, it should be recognized that applicant does not argue obviousness of the aluminum alloys but, instead relies on the grain size. In that regard, the reference to JP '567 teaches the grain size within the claimed range as addressed above and as discussed in the Office Action, the specific aluminum alloys would have been a matter of design choice depending upon that particular use of the rivet. The reference to Briles is not relied upon for the teaching of the grain size.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Flemming Saether 

Conferees:

Judy Swann  (David Bagnell SPE for Judy Swann)

Meredith Petravick 